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Application Ser. No. 09/900,773

2684

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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INVENTOR: Steven BELLOVIN

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TITLE: ENHANCED COMMUNICATION SERVICE FOR PREDICTING  
AND HANDLING COMMUNICATION INTERRUPTION

GROUP ART UNIT: 2684

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**RECEIVED**

APR 08 2004

Technology Center 2600

**RESPONSE TO OFFICE ACTION**

SIR:

In response to the Office Action mailed January 5, 2004 in the above-identified application, the Applicant respectfully submits the following.

**Amendments to the Specification** begin on page 2 of this paper.

**Amendments to the Claims** are reflected in the listing of claims which begins on page 4 of this paper.

**Remarks** begin on page 8 of this paper.

**Amendments to the Specification:**

Please amend the 4th paragraph on page 6 as shown below:

A1  
--With the advancement of technology there are now many systems available that can see or predict the call drop area or zone 30. One example of such a system is a GPS (Global Positioning System Satellite) 40. Provision of GPS equipment within subscriber terminals 10, 20, per se, is well-known.--

Please amend the sole paragraph on page 9 as follows:

A2  
Cont.  
--The phenomena that causes dead spots or drop-off areas is known, however, with this invention a system, such as, a cellular system, can predict these dead spots and plan accordingly. Preferably, the electronic device 23 will have the capability of analyzing and predicting the drop-off areas, however, the electronic device 23 could be integrated into a system or a process to analyze and predict the drop-off areas. The prediction of communication interruption can be based on a number of factors, such as, the use of historical data, geographical data, enhanced location data, topographical data and GPS (Global Positioning <sup>Syst.</sup> Satellite). For example, historical data can be created by the service provider when the service provider is aware of no coverage zones and that information can be made available to a device seeking this information. The historical data could be created by the device itself by analyzing the path the user is following and recording drop-off zones. Geographical data will be created by the use of geography of the area, such as, building, tunnels, and other structures that may create drop-off zones. The enhanced location data could be created by the service provider when suddenly the service providers finds that no coverage is available in a certain area and upon analysis it is determined that there is an equipment failure in that area or that there is some RF interference creating the drop-off zone or that mobile switching center (MSC) error is causing the dead zone. The enhanced location data could also be created, such as, by the service provider by monitoring the communication traffic patterns and finding no coverage areas. This information would then be made available to the device seeking such data. Thus the enhanced location services provide high-

accuracy real-time data. Topographical data will be created by the use of topology of the area, such as, hills, valleys, to name a few. GPS (Global Positioning System Satellite) can be used to monitor communication traffic flow patterns, topology, or similar other factors that contribute to the no coverage zones and providing this information to the device seeking this information. The device can also be placed in a learning mode, i.e., the device will remain in an active mode seeking communication interruption regions.--

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